

Claims

1. Surgical device for injecting a fluid and/or for removing tissue cells from a biological structure, comprising

a supply device (1) including a fluid jet unit for injecting a separation fluid or a process fluid and/or including a suction device for suctioning off separated or dissolved tissue cells and/or the separation fluid or the process fluid, and

a surgical hand piece (2) with an inner injection cannula (19) and an outer suction tube (23), both of which form an annular suction channel in the region of the surgical hand piece (2), wherein the injection cannula (19) includes a front nozzle opening (20) and the suction tube (23) includes a plurality of suction bores (24) distributed along its periphery,

characterized in that the surgical hand piece (2) is implemented in two parts, with the first part comprising a hand piece (14) with the injection cannula (19) and the second part comprising a complementary part that can be placed onto the injection cannula (19) and is configured for attachment to the hand piece (14) of the surgical hand piece (2).

2. Surgical device according to claim 1,

characterized in that the complementary part is a stabilizing handle (21) for stabilizing the injection cannula (19), with the complementary part having an outer shape adapted to the shape of the handle (14) and being adapted to be screwed onto the handle (14).

3. Surgical device according to claim 1,

characterized in that the complementary part comprises a handle (21') adapted to the handle (14) of the surgical hand piece (2) and an open stabilizing tube (22), wherein the inner diameter of the stabilizing tube (22) matches with clearance the outer diameter of the injection cannula (19) and the length of the stabilizing tube (22) is shorter than the length of the injection cannula (19) by a sufficient amount, so that the tip of the injection cannula (19) with the nozzle opening (20) protrudes by a sufficient length.

4. Surgical device according to claim 1,

characterized in that the complementary part comprises a handle (21") adapted to the handle (14) of the surgical hand piece (2) and a suction tube (23), wherein the suction tube (23) has a front axial bore (25) that matches with clearance the diameter of the injection cannula (19) and that the length of the suction tube (23) is shorter than the length of the injection cannula (19) by a sufficient amount, so that the tip of the injection cannula (19) with the nozzle opening (20) protrudes by a sufficient length.

5. Surgical device according to claims 1 to 4,

characterized in that for alternatively supply the injection cannula (19) with different process fluids, the fluid jet unit of the supply device (1) is provided with one or more supply pumps (5, 7), and with a switchable directional control valve (12).